WATER CONSERVATION NEWS

*"Building sustainability, reliability, and accountability through efficient water use"*

**In this issue...**



**Correction:**
*The article "MEASURE: Senate Bill No. 1347" (page 2) was mistakenly attributed to Baryohay Davidoff in the print version of this newsletter. The correct author, Kathleen Buchnoff, is credited in this version.*

# Landscaping Act of 2006: A New Start

*By Simon Eching and Kent Frame*

On Sept. 28, Gov. Arnold Schwarzenegger signed Assembly Bill 1881 creating the Water Conservation in Landscaping Act of 2006. The act requires the Department of Water Resources, among other things, to update a model Water Efficient Landscape ordinance for possible adoption by local governments.

In 1975, DWR created an Urban Water Conservation program in the Water Conservation Office (now called the Office of Water Use Efficiency and Transfers or OWUET). It began a landscape water conservation project. One of the first actions was to sponsor several demonstration gardens, with the first one in Sacramento in 1976. In 1979, DWR also published Bulletin 209, Plants for California Landscapes. The publication provided information on water efficient plants suitable for California dry climate. It was later replaced by the Water Use Classification of Landscape Species.

By 1984, pilot projects were beginning to demonstrate the effectiveness of landscape water conservation. These included a Landscape Water Audits project, and an economic analysis of the costs and benefits of reducing water use on existing residential landscapes, new residential landscapes, and large turf areas .

By 1990, California was in a fourth consecutive year of drought. On Sept. 20, 1990, Gov. Pete Wilson signed Assembly Bill 325 creating the Water Conservation in Landscaping Act of 1990. This bill required DWR by February 1, 1991, to appoint an advisory task force to work with the department in drafting a model ordinance for water efficient landscaping . After holding public hearings, and based on recommendations of the task force, DWR adopted the model ordinance in 1992.

By January 1993, local agencies were either to adopt a local water efficient landscape ordinance, adopt the state model ordinance for water efficient landscaping or state why the ordinance was not necessary.

In 2001, a report by Western Policy Research concluded that nearly 90 percent of new development between 1992 and 1999 took place in jurisdictions of agencies that had adopted an ordinance for water efficient landscaping. But researchers found deficiencies in the 1990 act. They found there was lack of education about the ordinance, maintenance contractors rarely irrigated accurately, and "maintenance" was the weakest link in design, installation, and maintenance chain. Partly because of that report, Assembly Bill 2717 was proposed.

Gov. Gray Davis signed Assembly Bill 2717 in 2004. It asked the California Urban Water Conservation Council to convene a stakeholder task force comprised of public and private agencies. The task force was to evaluate and recommend proposals to improve the efficiency of water use in urban irrigated landscapes. The bill also recommended that DWR form a stakeholder group to study adjusting the evapotranspiration (ET) factor as a part of the model ordinance. The task force adopted a comprehensive set of 43 recommendations to update the model ordinance of the Landscaping Act of 1990.

The recently signed Water Conservation in Landscaping Act (AB 1881 Laird, Chapter 559, Statutes of 2006) includes some of those recommendations by the CUWCC Landscape Taskforce (AB 2717). The act requires DWR to update the model ordinance in accordance with the recommendations of AB 2717 Task Force

*See **Landscaping Act** on Page 8*

***Water Conservation News*** provides information on water use efficiency developments. This free newsletter is published semi-annually by the California Department of Water Resources, Office of Water Use Efficiency and Transfers.

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*DWR does not endorse any of the businesses or consulting firms mentioned in this newsletter, since there may be others that offer the same or similar services.*


# MEASURE: Senate Bill No. 1347

*By Kathleen Buchnoff*

## Introduction

Senate Bill No. 1347, introduced by Senator Mike Machado during the 2006 session, was recently passed by the Legislature and signed by Gov. Arnold Schwarzenegger. This bill amended and added sections of Article 9.7 of the Health and Safety Code on the operation of solar evaporators, as part of an Integrated On-farm Drainage Management (IFDM) system.

The solar evaporator is the final component of the IFDM system to evaporate all drainage water and isolate the salt. The IFDM system was developed to improve drainage and reduce salt accumulation in the soils. Implementation of IFDM technology has demonstrated the cultivation of higher value crops and increased yields through soil improvement of salt-laden lands. The IFDM system is a viable alternative for landowners who may not choose to participate in a voluntary land retirement program for drainage-impacted lands. The system also has been implemented to eliminate discharge of agricultural drainage water to evaporation ponds.

## Amendments and Additions

This bill expands the installation and operation of solar evaporators from individual farmers to also include publicly organized land-based agencies, such as irrigation districts or resource conservation districts. The bill deleted the deadline of April 1, 2003, for the state board's adoption of emergency regulations for a solar evaporator. Also deleted was the January 1, 2008, sunset date on provisions that allowed a California Regional Water Quality Control Board to authorize the operation of a solar evaporator. The deletion of sunset date extends this authority indefinitely. The bill revised the definition of certain terms and information that a person is required to provide to the Regional Board. In addition, revisions were made to the timeframes and procedures for the Regional Board to approve or disapprove either a notice of intent (NOI) application or a notice of authority to operate (NAO) to construct and operate a solar evaporator.

## Monitoring and Salt Management Requirements

A change was made for monitoring data to be submitted by the operator to the Regional Board. Instead of submitting yearly data, the operator will now submit data each April and October. The operator will collect water flow and water quality data every two months and groundwater monitoring twice a year. Depending on the characterization of the constituents, the board can either reduce or increase the data collection schedule. The law covers several requirements for salt management, including a plan to manage the collection and removal of evaporate salt from the solar evaporator.

## Benefits

This legislation is of interest to DWR because of the department's involvement with agricultural drainage issues, specifically Integrated Drainage Management (IDM). In cooperation with Red Rock Ranch (RRR) and the WRCD, DWR developed a solar evaporator pilot project or module at RRR. For over three years,

*See **Measure** on Page 8*

### *Office of Water Use Efficiency and Transfers Mission Statement*

The Office of Water Use Efficiency and Transfers (OWUET) provides support for the stewardship of California's water resources and energy efficient use of water. This office is responsible for water use efficiency planning and coordination. Our services include technical and financial assistance, information collection and dissemination, resources evaluation, and implementation.

# Advantages of a Complete Urban Water Management Plan

*By David Todd*

Urban water suppliers are required to update their plans at least once every five years on or before December 31 in years ending in five and zero. Approximately 455 urban water suppliers were required to file 2005 Urban Water Management Plans, and of those, 325 (71 percent) filed an Urban Water Management Plan. About 46 percent of the plans were filed after December 31, 2005. As of October 23, 2006, the Department of Water Resources had completed its review of about 100 plans.

Agencies subject to the Urban Water Management Planning Act must have adopted a complete plan that meets the requirements of the law and submitted it to DWR to be eligible for drought assistance or funds received through DWR. DWR staff reviews Urban Water Management Plans to determine whether they are complete and consistent with Water Code Section 10631. Department staff notifies urban water suppliers of the review results with a letter. In addition, the recently released Proposition 50 Water Use Efficiency Proposal Solicitation Package includes criteria for UWMP submittal.

During the 2005 UWMP cycle, DWR staff have found some of the plans incomplete and suppliers will have to revise them. Each revision will lengthen the time required for the review. So suppliers planning to submit grant applications should file as early as possible to allow time for review and any necessary revisions. It will help ensure they have a complete UWMP and are eligible to receive future grants or loans.

DWR provides help for urban water suppliers to meet the requirements of the act. Staff provides information on how to prepare water management plans, start water conservation programs, and understand the requirements of the act. The DWR Office of Water Use Efficiency and Transfers updated its UWMP Worksheets and Demand Management Measure Worksheets for the 2005 UWMPs. They are posted on the DWR Office of Water Use Efficiency and Transfers Web site at: www.owue.water.ca.gov. Copies of UWMPs that have been identified as complete are posted on the Web site at: www.owue.water.ca.gov/urbanplan/uwmp.uwmp.cfm.

Please contact David Todd at 916-651-7027 or dtodd@water.ca.gov, or Chriss Fakunding at 916-651-9673 or cfakund@water.ca.gov, if you have questions regarding the Urban Water Management Planning Act.

# Selenium Mass Balance and Modeling

*By Karen Dulik and Jose Faria*

In 1996, the Safe, Clean, Reliable Water Supply Act (Proposition 204) in part, established a process for using designated agricultural drainage water management funds. The Department of Water Resources (DWR) developed a management program. The goal of the program is to develop methods of using and concentrating salts and reducing trace element contaminants in the state's subsurface agricultural drainage water.

In 2003, researchers from the University of California, Davis, and the U.S. Department of Agriculture were awarded Proposition 204 funding for a Selenium Mass Balance in Agricultural Evaporation Basins Study. The researchers focused their research on Tulare Lake Drainage District (TLDD) evaporation basins. The TLDD basins are in the 95,000-hectare TLDD boundaries in the southern San Joaquin Valley. About 79,800 hectares in TLDD are farmed and about 11,400 hectares of the farmed land is underlain by tile drains to alleviate waterlogging and salinity. Growers discharge drainage water into collector drains maintained by TLDD. This water is conveyed to three terminal evaporation basins: 107-hectare North Evaporation Basin, 449-hectare Hacienda Evaporation Basin, and 726-hectare South Evaporation Basin.

The basins attract a variety of shorebirds and waterfowl and provide foraging and nesting habitat. A study from 1985 to 1991 found elevated levels of selenium in bird tissue and eggs. During this period, egg losses on the TLDD evaporation basins were due to predation and selenium exposure. To compensate for bird losses, TLDD was required to provide compensation habitat. The 124-hectare compensation area provides foraging areas, predator protection, and better water quality.

Dr. Kenneth Tanji and Suduan Gao did the Selenium Mass Balance Study on TLDD's South Evaporation Basin (SEB) from September 2003 to October 2006.

The project objectives:

- develop a mass balance on water and selenium (Se) within the cells of the SEB
- modify, extend, and validate the existing selenium wetland model (Chow and others, 2004) for application to evaporation basins
- acquire model input data, parameters, and coefficients from past and ongoing evaporation basin activities

The SEB is high in soil salinity and is underlain by poor quality groundwater. There is no surface discharge of the drainage water. The only losses are due to seepage or evaporation. For the purposes of this study, the basin was divided into 10 cells and the drainage water was sequentially pumped through them. Monitoring included measuring drainage inflows into the SEB and between cells, and determining selenium speciation and associated

*See **Selenium** on Page 7*

# DWR Awards Prop 50 Desal Grants

*By Fawzi Karajeh*

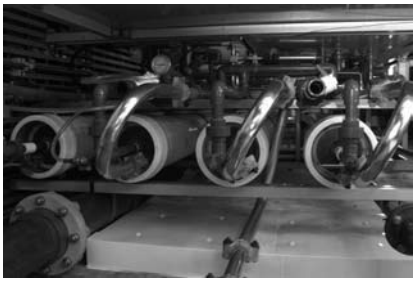
The funds will be used by local agencies, water districts, academic and research institutions for construction, demonstration projects, research and development, and feasibility studies to increase the development of new water supplies using water desalination technologies.

The awarded desalination projects are in the San Francisco Bay Area and in Monterey, Orange, and Ventura counties. Pilot projects in Long Beach, Los Angeles, Contra Costa, Kern, and Imperial counties are among those that will receive funds under this cycle of the desalination grant program. Research activities at the Lawrence Livermore National Laboratory, the University of California, Los Angeles, and the Colorado School of Mines are included in the awarded projects, as are feasibility studies by agencies in San Luis Obispo and San Diego counties.

Funding for the projects is available through Proposition 50, the Water Security, Clean Drinking Water, Coastal and Beach Protection Act passed by voters in 2002. Chapter 6(a) of Proposition 50 (Water Code Section 79545(a)) authorized DWR to administer a $50 million desalination grant program. The grant program aims to assist local public agencies with the development of new local potable water supplies by building feasible brackish water and ocean water desalination projects and help advance water desalination technology. This is the second round of funding under this grant program.

In March 2006, DWR received 49 eligible applications. The total funds requested by these applications amount to approximately $57.5 million while the total cost of the 49 proposed projects is $543.5 million. The $21.5 available million under the second desalination grant cycle will be used at 50 percent cost share to fund 24 of these projects. About $11 million of the available funds will support ocean and bay water desalination-related projects and $10.5 million will support brackish water desalination-related projects. The awarded grants, amounting to about 19 percent of the total cost of the selected projects, were matched by applicants' local share of about $90.5 million.

Desalination Review Panels were formed to help the state review the applications. The panels, with members representing local, state, and federal agencies and other stakeholders, evaluated the proposals using the criteria established for the grant program.



*Advances in desalination technologies, such as reverse osmosis, are helping to generate new potable water to California*

This year 's grants of $21.5 million and the last year 's grants of $24.75 million to local agencies, academic, and research institutions support seven construction projects, 15 demonstration projects, 14 research and development projects, and 12 feasibility studies to develop new water supplies using water desalination technologies.

A complete list of the awarded projects and other related information: www.owue.water.ca.gov/recycle/index.cfm

For questions, contact Fawzi Karajeh of DWR's Water Recycling and Desalination Branch at 916-651-9669 or fkarajeh@water.ca.gov.

# Recycled Water Production and Use Gets Additional Government Support

*By Fawzi Karajeh*

On September 28, Gov. Arnold Schwarzenegger signed AB 371 (Goldberg) into law as the Water Recycling Act of 2006. It seeks to increase the availability and use of recycled water and is expected to help the state meet its goal of recycling one million acre-feet of water per year by 2010.

The act calls upon various state agencies, including the State Department of Health Services, the Department of Water Resources, the State Water Resources Control Board, and the nine California regional water quality control boards, to take appropriate steps to implement the recommendations from the 2003 Recycled Water Task Force: www.owue.water.ca.gov/recycle/docs/TaskForceReport.htm .

The act also requires the Department of General Services and the California Department of Transportation (Caltrans) to install piping appropriate for recycled water use in any of their landscape irrigation projects if they are notified by a recycled water producer that within 10 years recycled water will be provided for those projects. The new law also requires the Department of Water Resources (DWR) to adopt and submit to the Building Standards Commission a state version of Appendix J of the Uniform Plumbing Code. This will ensure proper design standards to safely plumb buildings for both potable and recycled waters.

The Department of Water Resources will implement AB 371 depending on availability of funds. DWR will make earnest efforts to involve various stakeholders including planners, regulators, water agencies, cities and counties, water recycling industry, environmental groups, and others to provide them with an opportunity to help implement the relevant provisions of the act.

# CIMIS New Stations Added to Network

The California Irrigation Management Information System (CIMIS) has added four new weather stations to its network since it reported five new additions in a prior issue of *Water Conservation News*.

This brings the total active CIMIS stations to 131, with historical data still available at 70 inactive stations. The latter are stations that have been disconnected from the network for various reasons and are not collecting data any longer. We anticipate a few more stations will soon be added to the network. The four new additions are:

**Indio 2 (#200).** The Indio 2 CIMIS station was installed on May 16, 2006, and is in the city of Indio in Coachella Valley, Riverside County. It has replaced the Indio station (#162), which was disconnected from the network in February 2006. The geographic coordinates of the new Indio 2 station are 33.75° North latitude and 116.26° West longitude, with an elevation of 40 feet above sea level. The station stands on reference grass surface and therefore is referred to as a reference evapotranspiration (ETo) station.

**UC-Andrade (#201).** The UC-Andrade station is in the Imperial-Mexicali Valley – a desert type environment that is being irrigated to grow olives, grapes, a variety of truck crops, wheat, oats, corn, alfalfa, and other field crops. It was installed on January 1, 2006, and is owned by UABC. Its geographic coordinates are 32.49° North latitude and 115.04° West longitude, with an elevation of 120 feet above sea level. It stands in the middle of a 200-foot X 200-foot alfalfa surface and therefore reports ETo.

**Nipomo (#202).** The Nipomo station was installed on January 27, 2006, in the southwestern portion of San Luis Obispo County in a mixed urban and agricultural setting. The station is owned by the county and is at 35.03° North latitude and 120.56° West longitude at 255 feet elevation above sea level. Well-maintained turf grass is the reference surface on which the station stands and therefore it is an ETo station.

**Alpaugh (#203).** The Alpaugh station was installed on January 11, 2006, on a large farming operation in Tulare County. The station was installed on a turf

*See **CIMIS** on Page 8*

**BILL NUMBER: AB 371 CHAPTERED**

INTRODUCED BY
Assembly Member Goldberg
On FEBRUARY 11, 2005
And Signed by Governor Schwarzenegger
On September 28, 2006

**An act to add Sections 13555.5 and 13557 to the Water Code, relating to water.**

**THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:**

SECTION 1.

*This act shall be known, and may be cited, as the Water Recycling Act of 2006.*

SECTION 2.

*(a) The Legislature hereby finds and declares that the Recycled Water Task Force was convened pursuant to Section 13578 of the Water Code and evaluated the current framework of state and local rules, regulations, ordinances, and permits to identify the opportunities for, and obstacles or disincentives to, increasing the safe use of recycled water.*

*(b) It is the intent of the Legislature that state agencies, including the State Department of Health Services, the Department of Water Resources, the State Water Resources Control Board, and the nine California regional water quality control boards, take appropriate steps to implement the recommendations from the Recycled Water Task Force by enacting the Water Recycling Act of 2006, as a means to help the state meet its goal of recycling 1,000,000 acre-feet of water per year by 2010 in accordance with Section 13577 of the Water Code.*

SECTION 3. Section 13555.5 is added to the Water Code, to read:

13555.5.

*(a) If a recycled water producer determines that within*

*10 years the recycled water producer proposes to provide recycled water for use for state landscape irrigation that meets all of the conditions set forth in Section 13550, the recycled water producer shall so notify the Department of Transportation and the Department of General Services, and shall identify in the notice the area that is eligible to receive the recycled water, and the necessary infrastructure that the recycled water producer or the retail water supplier proposes to provide, to facilitate delivery of the recycled water.*

*(b) If notice has been provided pursuant to subdivision (a), all pipe installed by the Department of Transportation or the Department of General Services for landscape irrigation within the identified area shall be of the type necessary to meet the requirements of Section 116815 of the Health and Safety Code and applicable regulations.*

SECTION 4. Section 13557 is added to the Water Code, to read:

13557.

*(a) On or before July 1, 2008, the department, in consultation with the State Department of Health Services, shall adopt and submit to the California Building Standards Commission regulations to establish a state version of Appendix J of the Uniform Plumbing Code adopted by the International Association of Plumbing and Mechanical Officials to provide design standards to safely plumb buildings with both potable and recycled water systems.*

*(b) The department shall adopt regulations pursuant to subdivision(a) only if the Legislature appropriates funds for that purpose.*

# CALIFORNIA URBAN WATER CONSERVATION COUNCIL

## Council Celebrates 15th Anniversary!

It's hard to believe that it was really 15 years ago that 100 organizations stood on the steps of the State Capitol on a windy December morning to sign a landmark agreement on urban water conservation. Born out of the contentious Bay-Delta hearings, the agreement – the Memorandum of Understanding Regarding Urban Water Conservation in California – became the first full consensus partnership in the United States on water conservation issues. Now 378 members strong, the Council continues to work cooperatively to achieve water conservation benefits statewide. We have grown from a small band of dedicated volunteers to a multi-million dollar organization serving the needs of a diverse membership.

A celebration is planned for the evening of Wednesday, December 13, 2006, at the California Science Center in Los Angeles, immediately following the Council's plenary meeting. A gala dinner with a commemorative program will take place. All are invited. The cost is $40 per person, and you must have reservations. Please contact the Council office for details at 916-552-5885, extension 10.

## Numerous BMPs under Revision

In 1997, the Best Management Practices (BMPs) underwent a major revision. Since then, small changes have been made, and a new high-efficiency clothes washer BMP was adopted. But as time goes on, all of the BMPs are beginning to show their age, so revisions are necessary to nearly all of them.

The following BMPs are in various stages of review and reconstruction:

**BMP 1, Residential Water Surveys:** This BMP will "sunset" in 2007. A new outdoor residential BMP is being considered in its place (BMP 15).

**BMP 2, Residential Plumbing Retrofit:** Because of the sunsetting of BMP 1, various indoor components (toilet flappers, leaks, etc.) will now need to be embedded in BMP 2. The issue of how to determine showerhead saturation will also be reconsidered.

**BMP 3, System Water Audits, Leak Detection and Repair:** This BMP is undergoing a complete overhaul to make it consistent with new worldwide methods for evaluating and managing system water loss.

**BMP 4, Metering:** Because of legislation enacted to require metering of all customers in California, this BMP is being revised to recognize those new requirements and to set best performance benchmarks for new meter installation and maintenance.

**BMP 5, Large Landscape Conservation:** The AB 2717 Landscape Task Force recommended that the Council revise the ET adjustment factor from 100 percent to 80 percent. That revision is under consideration as part of the follow-up implementation required by the recently enacted AB 1881.

**BMP 6, High Efficiency Clothes Washers:** Revised in 2004 to dovetail with the new clothes-washer standards adopted by the California Energy Commission, this BMP needs to be extended for a longer period.

**BMP 11, Conservation Pricing:** The AB 2717 Landscape Task Force recommended that the Council revise BMP 11 to be more specific about the amount of revenue that should be collected from a volumetric charge. That revision is under consideration as part of the follow-up implementation required by the recently enacted AB 1881.

**BMP 13, Water Waste Prohibition:** The AB 2717 Landscape Task Force recommended that the Council revise BMP 13 to strengthen the prohibitions on overspray and runoff and to require enforcement of those prohibitions. That revision is under consideration as part of the follow-up implementation required by the recently enacted AB 1881.

**BMP 14, Residential ULFT Replacement:** With market availability of high-efficiency toilets at 1.3 gallons per flush, it no longer makes sense to have a BMP encouraging replacement of toilets to 1.6 gallons, when the 1.6 toilet is already required by federal law. Under consideration is whether to revise BMP 14 to instead incentivize the more efficient models.

**Performance Track:** In addition to the above BMP revisions, the Council is considering adopting a policy for a separate option for a "performance track," where a water agency can choose its own method of achieving water savings and substitute those savings for any or all of the quantifiable BMPs. The details are being developed.

The Council conducts a full consensus process for considering these BMP revisions. If you would like to be on one of the committees working on these revisions, please call Karl Kurka at the Council office at 916-552-5885, extension 17.

## Residential New Technologies DVD Available!

Are you interested in learning about new products and programs to help your agency save water? Want to visit exhibit halls to look at the latest technologies but simply don't have the time? Well, you

# CALIFORNIA URBAN WATER CONSERVATION COUNCIL

are in luck. The Council has assembled interesting speakers on a wide variety of residential conservation programs and compiled their presentations for you on a DVD. The DVD is interactive, allowing the user to choose "scenes" of speakers or "scenes" of vendors. The production quality of the DVD is excellent, and not your usual "talking head" visual. The speakers were chosen for their nationally-recognized expertise, programs, and products. Both indoor and outdoor residential water use is covered in the carefully edited 136 minutes of video.

The DVD is available for purchase from the Council for only $28.95, which includes tax, shipping and handling. Purchases can be made online at the Council's Web site Publications page at www.cuwcc.org. Or you can contact the Council office at 916-552-5885, extension 10.

Don't forget that we also have a newly revised Practical Plumbing Handbook. It has been one of our best sellers, geared to helping the average homeowner understand their water efficient products, how to maintain them properly and how to fix common leaks and other plumbing problems in the home.

Council members may order the booklets at the discounted price of $1.50 each. The non-member price is $2.50 each. Bulk orders will include shipping and handling. Order by emailing heather@cuwcc.org.

## Online BMP: Document Conservation Programs

*By Mary Ann Dickinson*

In 2005, your agency likely had to file an Urban Water Management Plan, required of any water supplier of 3,000 or more connections or delivering 3,000 or more acre-feet of water per year. If you filed that plan as was required under Section 10631 of the Water Code, you already know that there are reporting requirements on "demand management measures" in the law. These "demand management measures," or DMMs, parallel the California Urban Water Conservation Council's Best Management Practices (BMPs).

If you are a member of the Council, you have the ability to file electronic reports on the Council's Web site. Those electronic reports are the easiest way to document your conservation program activity. The Urban Water Management Planning Act allows any water agency to simply reference these reports in fulfillment of the requirement for reporting on the DMMs. The online BMP Reports are due by December 1 of each even-numbered year. Thus, BMP reports for the fiscal years 2004-2005 and 2005-2006 are due.

Although the online BMP reports may appear complex, filling out the reports is still far less work than preparing detailed narrative summaries of the DMMs for your urban water management plan. In addition, there are other advantages to using the Council's BMP Reporting database:


- The reports filed by water agencies can be automatically aggregated into statewide totals of water conservation activity. These summaries are viewed by the State Water Resources Control Board, the U.S. Bureau of Reclamation, and other state and federal agencies.
- The reports are tied to a separate savings estimation model that will provide your agency with technically-supportable estimates of water conservation program savings. The savings numbers are also automatically rolled up into statewide summaries.
- Because the Council's BMP Reporting database is publicly viewable, all of your water agency activities are easy for your customers to see and the Web site results provide documentation of your implementation efforts.
- The BMP Reporting database provides automatic calculation of compliance, called "Coverage Reports," that can help a water agency meet its commitments to BMPs or DMMs.

So if your water agency is not already a member of the Council and able to use this online reporting tool, please consider joining. For further information on membership in the Council, contact molly@cuwcc.org or visit the membership section at www.cuwcc.org.

## *SELENIUM* *From Page 3*

water quality indicators in the water and underlying sediments. Brine shrimp (Artemia spp.) were harvested from Cells 9 and 10.

Water quality testing showed that along the water flow pathway, reduced forms of selenium continued to increase in concentration. There was greater sediment selenium accumulation in Cell 1 than in Cell 9, and the largest fraction of selenium in the sediments was elemental and organic.

The UC Davis Dynamic Lake Model-Water Quality program was used to model the system. Water depth, salinity, and temperature were simulated for each cell. The modeled values for temperature, salinity, and depth were largely validated by the actual data from the cells. Mass balance studies based on modeling results showed selenium was lost to volatilization, seepage, and brine shrimp harvest, in that order.

This project shows promise in the area of modeling systems, giving some predictive power regarding water quality in complex systems. It also may have possible applications for dealing with selenium accumulation and other water quality issues. The researchers recommend performing future studies for directly measuring selenium losses and sediment profiles. Future modeling should include an analysis of biomass effects for improved results.

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*Address Correction Requested*

# Lining Canal Project Achieves Goals

*By Baryohay Davidoff and Megan Fidell*

The Lost Hills Water District received two of DWR's Water Use Efficiency Proposition 50 grants to line two separate canals in the district. Lost Hills WD got a $246,000 grant to line 1.1 miles of Canal 7N and $559,00 to line 3 miles of Canal 4S and N with a geomembrane liner.

Ponding tests showed potential savings of 95 acre-feet per year from Canal 7N, which was being lost to shallow saline groundwater. Out of those savings comes 24 acre-feet per year in drainage reduction from the district. In Canal 4S and N, Lost Hills WD expects to 250 acre-feet per year of water, and reduce drainage by 188 acre-feet per year. Lost Hills WD spent $327,000 in match money on the two projects.

Lost Hills WD received its contract from DWR in January 2006. By February, Lost Hills WD bid and contracted out the geomembrane lining. Construction – canal cleaning, surveying, grading, and preparation – got under way in February. On February 21, Lost Hills WD held a Canal Lining Educational Tour for water district employees throughout the San Joaquin Valley; 10 people showed up to tour the partially completed canal and learn about canal lining. Work was completed in early March 2006. During construction, Lost Hills WD employees were trained on the materials, methods and equipment to maintain the geomembrane lining.

The district finished construction early and under budget. Lost Hill is in process of lining additional 3-mile segment of canal with the remaining funds.

| | Lined Canal | Water Saved | Drainage Reductions | Prop 50 | Total | Grant | Grant to Date |
|---|---|---|---|---|---|---|---|
| **Service Area 7 North** | 1.1 mi | 95 AF | 24 AF | $121,06 AF | $307,200 | $245,760 | $230,018 |
| **Service Area 4** | 3 mi | 250 AF | 188 AF | $99.07 AF | $745,520 | $559,140 | $495,334 |

## *LANDSCAPING ACT* *From Page 1*

no later than January 1, 2009. The Water Conservation in Landscaping Act of 2006 also requires the Energy Commission, in consultation with DWR, to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

The new landscaping act requires DWR, not later than January 31, 2011, to prepare and submit a report to the Legislature about the status of water efficient landscape ordinances adopted by local agencies. DWR will develop the updated model ordinance through the rule-making process.

The task for updating the water efficient landscape model ordinance is the responsibility of OWUET. If you have questions, please contact Kent Frame at 916-651-7030.

## *MEASURE* *From Page 2*

several methods of operation were tested at various stages to optimize the operation of the pilot module. Data collected during the pilot demonstration were used to develop plans and specifications for a full capacity farm-scale solar evaporator. The research, development, and demonstration of IFDM has advanced the science, technology, and benefits to water managers, individual growers and political leaders throughout the San Joaquin Valley by providing a practical example of integrated farming and engineering methods to protect the quality of rivers, surface and groundwater resources, soils and the environment.

Senate Bill 1347 received the support of the WRCD, Community Alliance with Family Farmers, and Association of California Water Agencies. The bill text documents and chaptered version can be viewed at www.leginfo.ca.gov/bilinfo.html.

## *CIMIS* *From Page 5*

area that is surrounded by alfalfa in all directions. The station is owned by the U.S. Bureau of Land Management and is at 35.86° North latitude and 119.50° West longitude at an elevation of 210 feet above sea level.

Because of their locations, Indio 2, UC-Andrade, and Nipomo have cell phones whereas Alpaugh uses a land line for communication. CIMIS favors the use of land lines over cell phones because of communication problems with the cell phones in some areas of the State.

If interested in having a CIMIS station in your area, please contact CIMIS representative in your district for more information. The CIMIS staff list and contact information is at: wwwcimis.water.ca.gov/cimis/welcomeStaff.jsp.

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